

Louisiana Oyster Cultch Project

2018 Annual Report

PROJECT SUMMARY

The Louisiana Oyster Cultch Project involves (1) the placement of oyster cultch onto approximately 850 acres of public oyster seed grounds throughout coastal Louisiana and (2) construction of an oyster hatchery facility that would serve to improve existing oyster hatchery operations and produce supplemental larvae and seed.

Oyster Cultch Placement Component: The Louisiana Department of Wildlife and Fisheries (LDWF) will contract for the placement of cultch material onto approximately 850 acres of public oyster seed grounds throughout coastal Louisiana, including 3-Mile Bay, Drum Bay, Lake Fortuna, South Black Bay, Hackberry Bay, and Sister Lake. Cultch material consists of limestone rock, crushed concrete, oyster shell, and other similar material that, when placed in oyster spawning areas, provides a substrate on which free swimming oyster larvae can attach and grow into oysters. The cultch materials are planned to be placed at a planting density of 200 cubic yards/acre, although adjustments to this planting density may be made depending upon water bottom characteristics at the time of project implementation. The oyster cultch placements will employ cultch planting approaches utilized by LDWF since 1917.

Oyster Hatchery Component: The second portion of the project involves constructing an oyster hatchery facility that would serve to improve existing oyster hatchery operations to help facilitate and expedite success of the cultch placement. In order to provide a supplemental source of oyster larvae and oyster seed, LDWF will contract to construct a new building adjacent to the existing Sea Grant oyster hatchery located at the LDWF facility on Grand Isle, Louisiana. Larvae produced at the hatchery can be released into the water directly over cultch material or be remotely set on oyster cultch to create oyster seed. The new facility would be located next to the LDWF Research Lab at a site leased by LDWF from the Grand Isle Port Commission, located at 133 LSU Drive in Grand Isle, Louisiana. The site, which is currently undeveloped, is approximately 20,186 square feet, and is owned by the Grand Isle Port Commission and leased by LDWF. Louisiana State University plans to construct an additional building at this site prior to construction of the hatchery facility; this building is not part of this Early Restoration Project. The footprint of the hatchery building is proposed to be approximately 8400 sq ft. Parking will be available onsite. Oyster hatchery activities currently housed at the LDWF Research Lab in Grand Isle, Louisiana will all or in part be relocated to the new hatchery building once it is constructed.

Trustee Implementation Group(s)	Louisiana
Implementing Trustee(s)	Louisiana Coastal Protection and Restoration Authority (CPRA), Louisiana Department of Wildlife & Fisheries (LDWF)
Restoration Type(s)	Oysters
Project Status	In Progress
Restoration Phase	Early Restoration Phase 1
Multiple Component Project?	Yes

Louisiana Oyster Cultch Project

2018 Annual Report

Project Modifications

In April 2018, 16,154.9 cubic yards (yd3) of oyster shell cultch material were spread across 100 acres of existing 2012 Lake Fortuna cultch plant, in order to increase reef height, minimizing the chances of sedimentation; hypoxia-induced mortality. After this first installment, the remainder of the oyster shell cultch material, approximately 10,645.1 yd3 of shell, was determined to be unavailable. At the time of Project termination in September, 16,154 yd3 of cultch material (or approximately 60% of original contract amount) had been placed across the 100-acre Lake Fortuna cultch plant area. Side scan sonar surveys were conducted across the project area pre-and post-construction, in April and September 2018.

General Location(s)

Louisiana

KEY PHOTO



Louisiana Oyster Cultch Project

2018 Annual Report

Portal ID: 5

This report represents the status of the project as of Dec 31st, 2018.

BUDGET SUMMARY

		Louisiana TIG
		LDWF
Oysters	Authorized Budget	\$ 15,582,600.00
	Funds Received	\$ 14,874,300.00
	Expended	\$ 12,134,299.28
	Funds Received Balance Remaining	\$ 2,740,000.72
Project Totals	Authorized Budget	\$ 15,582,600.00
	Funds Received	\$ 14,874,300.00
	Expended	\$ 12,134,299.28
	Funds Received Balance Remaining	\$ 2,740,000.72



Louisiana Oyster Cultch Project

2018 Annual Report

COMPONENT LIST

Oyster Cultch Placements

This project involved (1) the placement of oyster cultch onto approximately 850 acres of public oyster seed grounds throughout coastal Louisiana and (2) construction of an oyster hatchery facility that will serve to improve existing oyster hatchery operations and produce supplemental larvae and seed.

Trustee Implementation Group(s)	Louisiana
Restoration Type(s)	Oysters

Oyster Hatchery

The project involves the construction of an oyster hatchery facility. The hatchery is located on Grand Isle, Louisiana and could produce up to 1 billion eyed larvae per season.

Trustee Implementation Group(s)	Louisiana
Restoration Type(s)	Oysters

Deepwater Horizon Restoration Project Report

Louisiana Oyster Cultch Project

2018 Annual Report



Portal ID: 5

This report represents the status of the project as of Dec 31st, 2018.

Oyster Cultch Placements

COMPONENT DETAILS

General Activity Description

No activities to report in Q4.

Project Activity Time Frame

Approximate Construction Start Jan-2012

Approximate Construction Duration 12 - 18 months

Planning Activities

Activity	Description	Status	Approx. Start	Date Completed
Engineering and Design	Monitoring/Pre Construction Side Scan Survey of Lake Fortuna Cultch Plant	Complete	Apr-2018	Apr-2018
Engineering and Design	Pre Construction Side Scan Survey of Lake Fortuna Cultch Plant	Complete	Apr-2018	Apr-2018

Post-Execution Activities

Activity	Description	Status	Approx. Start	Date Completed
Monitoring	Hydrologic Data collection - Continuous recorder deployment and servicing	In Progress	Jun-2018	
Monitoring	Meter-square quadrat sampling	Complete	Oct-2018	Nov-2018
Monitoring	Post Construction Side Scan Survey	Complete	Sep-2018	Sep-2018

Deepwater Horizon Restoration Project Report

Louisiana Oyster Cultch Project

2018 Annual Report



Portal ID: 5

This report represents the status of the project as of Dec 31st, 2018.

Oyster Cultch Placements

COMPONENT DETAILS

As-Built Overview

Habitat Footprints

Date Completed	Type of Habitat	Total Habitat	Action Type	Description
06-01-2013	Oyster Reef/Shell Bottom	1421 Acres	Restored	oyster cultch

As-Built

As-Built	Parameters	Date Completed	Comments
Oyster Cultch Placement	Cultch Type	Limestone, shell and concrete	06-01-2013
	Cultch Volume (cubic yards)	171384	
	New/Existing	Both	
Oyster Cultch Placement	Cultch Type	Cultch Type Relic oyster shell	04-01-2018
	Cultch Volume (cubic yards)	16155	
	New/Existing	Both	

Monitoring Overview

Monitoring Framework	N/A
Restoration Objectives	The restoration objectives are to 1) create or enhance oyster cultch areas; and 2) promote oyster settlement and growth, either naturally or through the addition of hatchery-sourced oysters.
Comments	No comments available for this section

Louisiana Oyster Cultch Project

2018 Annual Report

Oyster Cultch Placements

COMPONENT DETAILS

Other Spatial Survey Monitoring Activity

Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Area		04/01/2012	06/02/2013	once per cultch site	Cultch Plant Construction Maintenance: Cover a minimum of 850 acres of public oyster areas with suitable cultch material among 6 separate cultch placement sites. Status: Achieved. To date, all six proposed cultch placement sites have been constructed. Cultch plant construction monitoring results indicate that cultch material covered 1,421 acres of water bottom.

Performance Criteria

No performance criteria currently available for this parameter



Oyster Cultch Placements

COMPONENT DETAILS

Oyster Sampling Monitoring Activity

Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Density		07/01/2014	08/01/2014	once per cultch site	

Performance Criteria

Target	Target Date	Target Achieved?	Comments
20 seed-size oysters per square meter	12/31/2017	Yes	

Louisiana Oyster Cultch Project

2018 Annual Report

Oyster Cultch Placements

COMPONENT DETAILS

Monitoring Documents/Data

Monitoring Document	Date Submitted	Document Type	Description
2015_April_LA_ER_Oyster_Cultch_Mon_Data_062116.xlsx	09-30-2016	Monitoring Data	Early restoration oyster cultch project-specific dredge sampling was used to monitor oyster mortality and size between summer quadrat sampling events. The spring 2015 dredge sampling program was the fourth project-specific sampling event focusing on oyster performance that occurred at project cultch plant LDWF deployed standard three-minute 24-inch hand dredge at 20 replicate sample locations within each project cultch plant. All oysters within each sample were measured, counted, and then returned to the water. Data generated from this effort are included herein.
2015_Jan_LA_ER_Oyster_Cultch_Mon_Data_061915.xlsx	09-30-2016	Monitoring Data	Early restoration oyster cultch project-specific dredge sampling was used to monitor oyster mortality and size between summer quadrat sampling events. The winter 2015 dredge sampling program was the third project-specific sampling event focusing on oyster performance that occurred at project cultch plant LDWF deployed standard three-minute 24-inch hand dredge at 20 replicate sample locations within each project cultch plant. All oysters within each sample were measured, counted, and then returned to the water. Data generated from this effort are included herein.
2014_July_LA_ER_Oyster_Cultch_Mon_Data.013015_Final.xlsx	09-26-2016	Monitoring Data	Final LA Early Restoration (Phase 1) Oyster Cultch Project Jul 2014 Monitoring Data
2014_Oct_LA_ER_Oyster_Cultch_Mon_Data.013015_Final.xlsx	09-26-2016	Monitoring Data	Final LA Early Restoration (Phase 1) Oyster Cultch Project Oct 2014 Monitoring Data
LA Oyster Cultch Project_Monitoring Plan_111714_Final.pdf	09-26-2016	Monitoring and Adaptive Management Plan	LA Oyster Cultch Project Monitoring Plan
Comprehensive Final_LA Oyster Cultch Project_2016 05 09	03-23-2017	Final Monitoring and Adaptive Management Report	The Louisiana Natural Resource Trustees selected the Louisiana Oyster Cultch Project as a Deepwater Horizon early restoration project to compensate the public for injury to oysters. The project involves placing oyster cultch onto public oyster areas at six locations in coastal Louisiana, monitoring oyster recruitment and production in restored areas to assess performance, and constructing an oyster hatchery facility to improve existing hatchery operations and produce supplemental larvae and seed to help facilitate success of the cultch plantings, if necessary.



Louisiana Oyster Cultch Project

2018 Annual Report

Portal ID: 5
This report represents the status of the project as of Dec 31st, 2018.

Oyster Cultch Placements

COMPONENT DETAILS

Monitoring Documents/Data

Monitoring Document	Date Submitted	Document Type	Description
LA_ER Phase 1_Oyster Cultch_Prg Rpt_030915_Final.pdf	09-26-2016	Final Monitoring and Adaptive Management Report	

Louisiana Oyster Cultch Project

2018 Annual Report

Oyster Cultch Placements

COMPONENT DETAILS

Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Bald and Golden Eagle Protection Act (USFWS)		N/A	
Coastal Barrier Resources Act (USFWS)		N/A	
Coastal Zone Management Act	National Oceanic and Atmospheric Administration (NOAA)	Complete	Letter from LA DNR to NOAA Re: Draft 1 Early Restoration Plan and Environmental Assessment (Phase 1 DERP) [CZMA Consistency Determination] (March 14, 2012) Letter from MS DMR to NOAA OGC Re: DMR-120259; Draft Phase 1 Early Restoration Plan and Environmental Assessment (Phase 1 DERP) [CZMA Consistency Determination] (March 9, 2012)
Endangered Species Act (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	Letter from NOAA NMFS to NOAA RC Center Re: Deepwater Horizon Oil Spill Draft Phase 1 Early Restoration Plan [ESA Section 7 Consultation Response] (April 2, 2012) Memorandum from USFWS to DOI Re: Informal Consultation for the Proposed Louisiana Trustee Implementation Group Draft Restoration Plan/Environmental Assessment #4: Nutrient Reduction (Nonpoint Source) and Recreational Use [ESA Section 7 Consultation Response] (July 17, 2018)
Endangered Species Act (USFWS)	Department of the Interior (DOI)	Complete	Louisiana Oyster Cultch Restoration [ESA Section 7 Consultation Initiation and Response] (February 9, 2012) Memorandum from USFWS to DOI Re: Informal Consultation for the Proposed Louisiana Trustee Implementation Group Draft Restoration Plan/Environmental Assessment #4: Nutrient Reduction (Nonpoint Source) and Recreational Use [ESA Section 7 Consultation Response] (July 17, 2018)

Deepwater Horizon Restoration Project Report

Louisiana Oyster Cultch Project

2018 Annual Report



Portal ID: 5

This report represents the status of the project as of Dec 31st, 2018.

Oyster Cultch Placements

COMPONENT DETAILS

Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Essential Fish Habitat (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	Memorandum from NOAA NMFS to NOAA RC Re: Essential Fish Habitat (EFH) review of the Phase I Early Restoration Projects [EFH Consultation Response] (February 14, 2012) Supplemental EFH Assessment: Pass-a-Loutre WMA Campground Project [EFH Consultation Response] (June 2018)
Marine Mammal Protection Act (NMFS)		N/A	
Marine Mammal Protection Act (USFWS)		N/A	
Migratory Bird Treaty Act (USFWS)		N/A	
National Environmental Policy Act	Department of the Interior (DOI)	Complete	Deepwater Horizon Oil Spill Phase I Early Restoration Plan and Environmental Assessment. (April 16, 2012)
National Historic Preservation Act		N/A	
Rivers and Harbors Act/Clean Water Act		N/A	

Deepwater Horizon Restoration Project Report

Louisiana Oyster Cultch Project

2018 Annual Report



Portal ID: 5

This report represents the status of the project as of Dec 31st, 2018.

Oyster Hatchery

COMPONENT DETAILS

General Activity Description

Remaining equipment and supplies were purchased and installed in the facility.

Project Activity Time Frame

Approximate Construction Start Jan-2013

Approximate Construction Duration 12 - 18 months

Activity	Description	Status	Approx. Start	Date Completed
----------	-------------	--------	---------------	----------------

As-Built Overview

Habitat Footprints

Date Completed	Type of Habitat	Total Habitat	Action Type	Description
No records are available				

As-Built

As-Built	Parameters	Date Completed	Comments
Hatcheries	Existing Hatcheries Count	0	As of May 2016, no hatchery-reared oysters have been used to augment oyster production in any of the six cultch plant locations described in this report. The project cultch plants have exceeded performance criteria. The Trustees do not expect to extensively utilize hatchery-produced spat for this project. However, hatchery-produced oysters will be used to augment natural production on the State's existing and future public seed grounds.
	New Hatcheries Count	1	
	Species	oysters	

Louisiana Oyster Cultch Project

2018 Annual Report

Oyster Hatchery

COMPONENT DETAILS

Monitoring Overview

Monitoring Framework	N/A
Restoration Objectives	The goal of this project is to produce seed-sized and sack-sized oysters on public oyster seed grounds to help compensate the public for oyster injuries in Louisiana and design, construct, and operate an oyster hatchery.
Comments	<i>No comments available for this section</i>

Construction As-Built Survey Monitoring Activity

Monitoring Parameters

Parameter	Info	Approx Start Date	Approx End Date	Frequency	Comments
Structural dimensions	Approximately 5,200 square feet	07/09/2013	07/01/2015		Construction of the hatchery: The State of Louisiana started construction on the oyster hatchery for this project in 2013 and completed construction in summer 2015.

Performance Criteria

No performance criteria currently available for this parameter

Monitoring Documents/Data

Monitoring Document	Date Submitted	Document Type	Description
<i>No records are available</i>			

Louisiana Oyster Cultch Project

2018 Annual Report

Oyster Hatchery

COMPONENT DETAILS

Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Bald and Golden Eagle Protection Act (USFWS)		N/A	
Coastal Barrier Resources Act (USFWS)		N/A	
Coastal Zone Management Act	National Oceanic and Atmospheric Administration (NOAA)	Complete	Letter from LA DNR to NOAA Re: Draft 1 Early Restoration Plan and Environmental Assessment (Phase 1 DERP) [CZMA Consistency Determination] (March 14, 2012) Letter from MS DMR to NOAA OGC Re: DMR-120259; Draft Phase 1 Early Restoration Plan and Environmental Assessment (Phase 1 DERP) [CZMA Consistency Determination] (March 9, 2012)
Endangered Species Act (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	Letter from NOAA NMFS to NOAA RC Center Re: Deepwater Horizon Oil Spill Draft Phase 1 Early Restoration Plan [ESA Section 7 Consultation Response] (April 2, 2012) Memorandum from USFWS to DOI Re: Informal Consultation for the Proposed Louisiana Trustee implementation Group Draft Restoration Plan/Environmental Assessment #4: Nutrient Reduction (Nonpoint Source) and Recreational Use [ESA Section 7 Consultation Response] (July 17, 2018)
Endangered Species Act (USFWS)	Department of the Interior (DOI)	Complete	Louisiana Oyster Cultch Restoration [ESA Section 7 Consultation Initiation and Response] (February 9, 2012) Memorandum from USFWS to DOI Re: Informal Consultation for the Proposed Louisiana Trustee implementation Group Draft Restoration Plan/Environmental Assessment #4: Nutrient Reduction (Nonpoint Source) and Recreational Use [ESA Section 7 Consultation Response] (July 17, 2018)
Essential Fish Habitat (NMFS)	National Oceanic and Atmospheric Administration (NOAA)	Complete	Memorandum from NOAA NMFS to NOAA RC Re: Essential Fish Habitat (EFH) review of the Phase I Early Restoration Projects [EFH Consultation Response] (February 14, 2012)

Deepwater Horizon Restoration Project Report

Louisiana Oyster Cultch Project

2018 Annual Report



Portal ID: 5

This report represents the status of the project as of Dec 31st, 2018.

Oyster Hatchery

COMPONENT DETAILS

Environmental Compliance

Regulatory Requirement	Lead Agency	Status	Documents
Marine Mammal Protection Act (NMFS)		N/A	
Marine Mammal Protection Act (USFWS)		N/A	
Migratory Bird Treaty Act (USFWS)	Department of the Interior (DOI)	Complete	
National Environmental Policy Act	Department of the Interior (DOI)	Complete	Deepwater Horizon Oil Spill Phase I Early Restoration Plan and Environmental Assessment. (April 16, 2012)
National Historic Preservation Act		N/A	
Rivers and Harbors Act/Clean Water Act		N/A	



Louisiana Oyster Cultch Project

2018 Annual Report

Portal ID: 5
This report represents the status of the project as of Dec 31st, 2018.

PROJECT CONTACTS

Name	Title	Organization	Phone	Email	Location	Project Role(s)
Shirley Long	Restoration Specialist	Louisiana Coastal Protection and Restoration Authority (CPRA)	(225) 342-4708	shirley.long@la.gov	Baton Rouge, LA	Public Affairs Representative